

Discussion of Kirsten

Claims 1-5, 7, 8, 10, 14-15, 17-20 and 23 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Kirsten. This rejection is respectfully traversed. An anticipation rejection requires that each and every element of the claimed invention as set forth in the claim be provided in the cited reference. See *Akamai Technologies Inc. v. Cable & Wireless Internet Services Inc.*, 68 USPQ2d 1186 (CA FC 2003), and cases cited therein. As discussed in detail below, Kirsten does not meet the requirements for an anticipation rejection.

Kirsten discloses a compressed digital video reload and playback system for use in industrial surveillance. The record function of Kirsten is shown in Figure 4. A video selector 70 that selects one of eight camera signals and routes this signal to an output terminal 100. The selector output terminal is coupled to a video digitizer 72. The video digitizer 72 extracts a digital representation of the image data and the synchronization signals from the analog video. An acquisition controller 104 controls the state of the selector which couples video signals to the digitizer by way of selector control 114. Synchronization data 116 is received by the acquisition controller from the digitizer. The acquisition controller communicates with a CPU 122 via a processor bus 112. A digital field/frame capture 102 receives image data and synchronization data from the video digitizer. The field/frame capture stores an array of image data from a single video field or a pair of fields representing a frame. Synchronization data 116 is used to key the image data into correct array locations. Capture of a field or frame commences on receipt of a start field/frame 118 signal from the acquisition controller. When the field/frame capture receives a field/frame-valid signal the image data retained in the array is designated a complete image. The image data is then transferred to the image compressor 74 (Kirsten at col. 9, lines 5-39).

The playback function of Kirsten is shown in Figure 6. All hardware blocks connect to a common bus 150. Removable media storage drive 76 accepts media recorded on a separate recording device. Fixed-media storage device 78 is shared with the record function in a common record/playback device. Removable media transfer device 80 permits re-recording of image sequences from the primary storage devices (Col. 9, lines 53-60). A computer graphics adaptor 140 connects to the processor bus to supply images to a computer graphics monitor 144. A video

converter 142 is connected to the processor bus and generates composite or component-video for viewing on a standard TV monitor 66 or for transfer to a VCR 62. An audio converter 146 reproduces audio files via an audio transducer 148 (Col. 9, line 65 through Col. 10, line 10).

Figure 7 of Kirsten illustrates the playback function. A playback controller directs which images or sequence of images are to be decompressed and displayed. Images are fetched from storage by a data searched 170. These images are decompressed by image decompressor 172. The playback control loads decompressed images into video converter 142 or graphics adaptor 140 in step with a playback clock derived from the system clock 106. The playback controller may cause the video converter or graphics controller to repeat images until a new image is available from the storage record (Col. 15, lines 50-62).

The disclosure of Kirsten is in direct contrast to Applicants' claimed invention. With Applicant's claimed invention, video frames are received at an input frame rate. Ones of said video frames are captured at a still picture capture rate which is less than the input frame rate. The captured video frames are provided to a video compressor at the input frame rate. An already captured video frame is repeatedly provided to the video compressor at the input frame rate until a new frame is captured. The captured video frames are transmitted after compression by the video compressor at a still picture repetition rate that is no less than the capture rate.

In contrast to Applicants' claimed invention, in Kirsten, video frames are captured and stored for later retrieval, not transmitted as claimed by Applicants.

Further, in Kirsten, the playback or display of the still image is controlled by the decoding/playback side of the described system. In particular, the playback controller 174 of Kirsten determines which images are to be recovered from storage by the data searcher 170. These images are decompressed by image decompressor 172. The decompressed images are loaded into video converter 142 or graphics adaptor 140, which is directed to repeat images by the controller 174 until a new image is provided from storage. Therefore, in Kirsten, the display of the decompressed image is controlled at the playback side of the device after it is received from storage.

In contrast, with Applicants' claimed invention the captured video frame is repeatedly provided to the video compressor, and the compressed captured video frames are transmitted

after compression by the video compressor at a still picture repetition rate that is no less than the capture rate. Since the capture rate is defined in the claims to be less than the input frame rate, the same compressed still image will be transmitted (and then decoded and displayed) repeatedly until a new frame is captured. Therefore, with Applicants' claimed invention, the display of a still image is controlled at the encoding/record side by controlling the rate at which the compressed image is transmitted.

Applicants claimed invention enables compressed still picture sequences to be transmitted at a very low bit rate. The still pictures can be trickled out of the encoder over a relatively long period of time thereby saving transmission bandwidth. Thus, rather than dedicating a full bandwidth real-time video service to still images, the still pictures can be sent to a population of decoders on a reduced bandwidth channel (See e.g., page 8, lines 1-24 of Applicants' specification). Kirsten is not concerned with conserving transmission bandwidth, since the device of Kirsten is essentially a integrated record/playback device for use in video surveillance. There is no discussion or suggestion in Kirsten that compressed video still images are transmitted to another location. Rather, in Kirsten, the compressed video still images are stored on a storage device until retrieved, at which time they are decompressed and displayed on a local monitor.

Further, Kirsten does not disclose or remotely suggest that a still picture capture rate of the video frames is less than the input frame rate, and that the still picture repetition rate is no less than the capture rate. In Kirsten, there is no disclosure or suggestion that a still picture repetition rate (the rate at which the still image is transmitted) is in any way related to the capture rate. With Applicants' claimed invention, the captured and compressed still image is transmitted repeatedly at the still picture repetition rate until a new picture is captured. In contrast, in Kirsten, a single still image is retrieved from the storage device, and this single image is decoded and then repeatedly displayed.

As Kirsten does not disclose each and every element of the invention as claimed, the rejections under 35 U.S.C. § 102(b) are believed to be improper, and withdrawal of the rejections is respectfully requested. See, *Akamai Technologies Inc., supra*.

Applicants respectfully submit that the present invention is not anticipated by and would

not have been obvious to one skilled in the art in view of Kirsten, taken alone or in combination with Quirk or any of the other prior art of record.

In view of the foregoing, withdrawal of the rejections under 35 U.S.C. § 103(a) is also respectfully requested.

Further remarks regarding the asserted relationship between Applicant's claims and the prior art are not deemed necessary, in view of the foregoing discussion. Applicants' silence as to any of the Examiner's comments is not indicative of an acquiescence to the stated grounds of rejection.

Conclusion

In view of the above, entry of the present amendment and reconsideration and allowance of each of the claims is respectfully requested. If there are any remaining issues that need to be addressed in order to place this application into condition for allowance, the Examiner is requested to telephone Applicants undersigned attorney.

Respectfully submitted,



Douglas M. McAllister

Attorney for Applicant(s)

Registration No. 37,886

Law Office of Barry R. Lipsitz

755 Main Street

Monroe, CT 06468

(203) 459-0200

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